Truths and Mistruths

Historical Riparian Conditions Yesterday and Today

Rural Heritage Preservation Project, Report No. 112

Compiled and presented by Cliff Gardner, June 24, 2013

It is unfortunate that persons working within government tend to exaggerate range and resource condition. (See article at right) We understand it is their job to promote and protect resource health. Too often however, those in charge go too far, and more often than not, more harm than good is done.

Such has been the case regarding the manner in which riparian conditions (past and present) have been presented to the public. When this happens, it seems only reasonable that someone set the record straight. This is what the attached information is about. It is an attempt to set the record straight.

3/2/88 Reno G-J

Grazing methods damaging Western lands, official says

WASHINGTON (AP) — Poor livestock grazing practices have damaged tens of thousands of miles of vital streamside areas on Bureau of Land Management property across the West, a General Accounting Office official said Tuesday.

James Duffus, associate director of the resources, community and economic development division of GAO, gave the negative picture of riparian areas to the House Interior national parks and public lands subcommittee.

Duffus said that although the damage can be reversed, BLM lacks the skilled staff to do the job and perhaps the will to overcome opposition from ranchers using BLM land under the taxpayer-subsidized grazing fee program.

He said streamside areas are important in the arid West because they help raise water tables, collect sediment, increase the availability of forage, dissipate the energy of flood waters and serve as fish and wildlife habitats.

"It has taken decades of abuse to produce the level of riparian area degradation that currently exists," Duffus said.

He said that while BLM does not know the extent of the damage, "the partial information that is available shows that there are tens of thousands of miles of riparian areas in the West, with only a small portion of them in good condition."

COMPARISON PHOTOGRAPHY
YESTERDAY AND TODAY

In 1992, the Bureau of Land Management, the Forest Service, the Nevada Department of Wildlife, NRDC, and Extension Service, began conducting riparian workshops at various locations throughout Nevada, advocating the need for restoring riparian conditions along streams and waterways to a original condition. The problem is, it is apparent that those involved have no idea what original conditions were at the time of first settlement..

Early in the 1980's, a history buff named William Hill took time from what he was doing to visit places along the old Oregon trail from Independence Missouri to the Willamette Valley, Oregon. One thing led to another, and soon Mr. Hill was taking comparison photographs of areas were early photography and paintings had been accomplished.

Interestingly, non of the comparisons which Mr. Hill accomplished support the claims made by modern day experts. Streams and waterways across the American West have not been destroyed by man as we are now being told - but instead have steadily improved over time - so that today, where once there was very little to no vegetation found along our rivers and streams, now screams and riverbanks have stabilized and become vegetated. Consider the following.

Above is a earliest phonograph taken of old Fort Laramie. Located along the North Platt River, in today's eastern Wyoming, Fort Laramie was the most important stop along the Oregon Trail for those headed for Oregon Territory in the early 1800's. Note how wide and braided the riverbed was at the time when the photograph was taken. Below is a more recent photograph taken by William Hill. Notice how the banks of the river have now stabilized. Note as well, how the trees now obscure much of the river. Instead of deteriorating since the time of first settlement, river conditions have improved dramatically.

Above is a photograph of the famous Red Butts at Bessemer Bend in today's eastern Wyoming, were photographed taken by William Henry Jackson in 1870. The emigrants crossed the North Platte at this ford. The more recent photo below was taken by William Hall shows a bridge that now spans the river to the right. Notice how the vegetation has increased in the area over time.

After leaving the North Platt River, immigrants traveled along the Sweetwater River for nearly 100 miles as they made their way across today's central Wyoming, toward South Pass. Midway, they were soon to pass Independence Rock and Devils Gate.

Above is a sketch of Devils Gate, viewed and illustrated from the east by William Henry Tappan in 1849. The more recent photo below was taken by William Hill. Note the Dumbbell Ranch headquarters across the bridge to the left.

Devil's Gate was an important landmark and milestone for the early Oregon Trail Travelers. Situated on the Sweetwater River a short distance from Independence Rock, in central Wyoming, it generally represented the mid-way point for those traveling to California or Oregon.

The photo above was taken in the early 1870's by William Henry Jackson, looking west from Devil's Gate up the Sweeteater River and valley. The lower photo was taken from the same spot 120 years later, showing the Sun Ranch. Note the increase in willow growth along the banks of the river in the more recent photo. Photos supplied by Dennis Sun, current owner of the Sun Ranch, as of Aug. 2011.

Pristine May Not Be What We Think It Is

Quentin Skinner, professor in the Department of Rangeland Ecology and Watershed Management at the University of Wyoming's College of Agriculture put together a historical perspective on riparian zones in the late 1980s. The paper was presented in 1986 at the Wyoming Water 1986 and Streamside Zone Conference in Casper, and more recently in November 1995 at a conference at Tufts University which focused on Environmental Enhancement Through Agriculture. Joe Hiller who is currently the Associate Director of Cooperative Extension Service at the University of Wyoming co-presented the paper with Dr. Skinner at Tufts. They offer some insight as to what riparian areas looked like in the 1800's, and how agriculture heightened the quality and the extent of riparian wetlands in the semi-arid western United States. Skinner and Hiller divide the management history of western riparian areas into six periods; exploration, migration, settlement, after creation of dams and reservoir storage, multiple use management, and riparian zone management.

Using the written accounts of the Lewis and Clark expeditions, Skinner and Hiller conclude that riparian vegetation was limited to specific situations. Water would spread over wide channels during high flows, then return to narrow channels during low flow. The observations of Lewis and Clark imply that river banks were seldom overflooded. Vegetation was noted to be at the very edges of straight reaches in a water channel, at meander point bars where groundwater interflow would supply water, at stream junctions where groundwater and surface water moved from one stream to the next, and on islands where water in the channel was available even at low flows.

Expedition accounts also report that buffalo, as well as the Native Americans, were confined to riparian areas because of their need for water and shelter. Huge herds of buffalo were reported as were the impacts that these herds had on vegetation and riparian areas. One account by Captain Fremont on the North Platte, near Casper, in July of 1842 says: "We found no grass today at noon; and in the course of our search on the Platte, came to a grove of cottonwoods where an Indian village had recently encamped. Boughs of the cottonwoods, yet green, covered the ground, which the Indians had cut down to feed their horses upon. It is only in the winter that recourse is had to this means of sustaining them; and their resort to it at this time was a striking evidence of the state of the country."

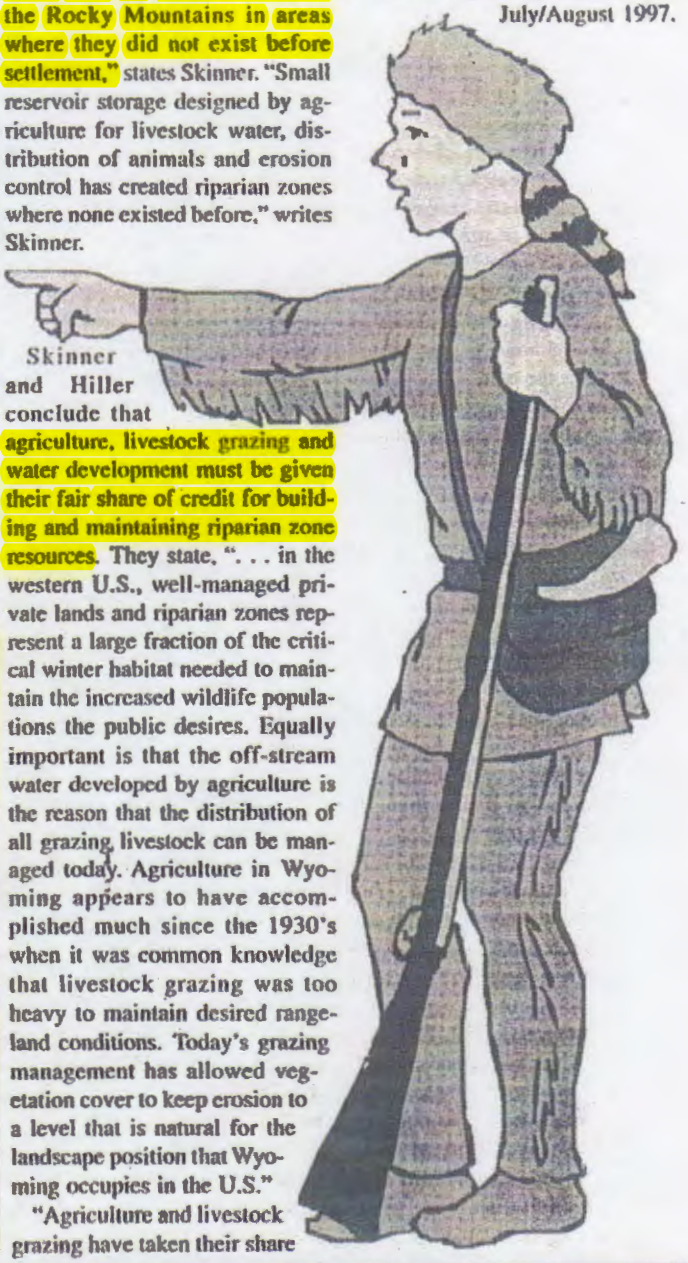
Water is absolutely necessary to life, so settlement naturally took place close to rivers and streams. Agriculture replaced buffalo with livestock, and began to develop off-stream water supplies. These activities reduced the impact on riparian areas, and reduced erosion by diverting high flows to other uses such as flood irrigation which in turn provided groundwater, that according to Skinner "was, and often still is, stored under the developed land mass that borders our present perennial streams." Reductions in streamflow during spring runoff caused sediment to be deposited along stream banks and fill in the less-developed braided channels. Streamflow became consolidated into one or a few channels, with the wide channels that Lewis and Clark saw becoming riparian zone flood plains. These flood plains are still supported today by the over-bank flooding that occurs during spring runoff. The change in configuration of stream channels that occurred during settlement actually augmented riparian zones.

Further augmentation of riparian areas would come with the creation of reservoir storage. "Riparian zone wetlands along regulated river systems now support corridor forest from the Missouri River to the Rocky Mountains in areas where they did not exist before settlement," states Skinner. "Small reservoir storage designed by agriculture for livestock water, distribution of animals and erosion control has created riparian zones where none existed before," writes Skinner.

Skinner and Hiller conclude that agriculture, livestock grazing and water development must be given their fair share of credit for building and maintaining riparian zone resources. They state, ". . . in the western U.S., well-managed private lands and riparian zones represent a large fraction of the critical winter habitat needed to maintain the increased wildlife populations the public desires. Equally important is that the off-stream water developed by agriculture is the reason that the distribution of all grazing livestock can be managed today. Agriculture in Wyoming appears to have accomplished much since the 1930's when it was common knowledge that livestock grazing was too heavy to maintain desired rangeland conditions. Today's grazing management has allowed vegetation cover to keep erosion to a level that is natural for the landscape position that Wyoming occupies in the U.S."

"Agriculture and livestock grazing have taken their share of criticism for reducing riparian zones. We hope that this historical perspective of water development in the semi-arid west puts some of the myths concerning the destructiveness of agriculture to rest," they write.

From Wyoming Agriculture, July/August 1997.



In Nevada, two of the most telling photos taken were of Jarbidge in 1910.

The Bisbee photos above depict well the conditions that existed at the newly staked camp site of Jarbidge in 1910. Notice that the river is broadly defined, subject to continuing erosion, and poorly vegetated. Notice as well, there are few tree trunks, trees or other woody vegetation piled or scattered along the course of the river as would be the case if there would have been had the river been well vegetated at a previous time.

The following report depicts well, waterway conditions as they appeared along the Humboldt and elsewhere within the West during the 1800's

CONFLICT CONSERNING THE HUMBOLDT

Over the last several years, the Nevada Department of Wildlife, which is now the Nevada Division of Wildlife, with support from the US Fish and Wildlife Service, and now the Nevada Division of the Water Planning, have been gearing up for increased governmental control over resources involving the Humboldt Rivers System. Their excuse for this of course, is that resources found along streams and waterways of the Humboldt are in a rapidly deteriorating condition. In a document recently produced by the Nevada Department of Wildlife, titled, *WILDLIFE AND WILDLIFE HABITAT ASSOCIATED WITH THE HUMBOLDT RIVER AND ITS MAJOR TRIBUTARIES*, it is stated:

> "...the Humboldt River System is degrading at a rapid rate. Perhaps the most telling statistic identifying such a trend is that rivers in the study area have collectively lost 6.0% of their length in a relatively short period of time. Unfortunately, though quality data comparable to that assembled for the study area is lacking, subjective observations indicate similar loss of riparian-wetland habitats and deterioration of stream and river channels is rampant in watersheds throughout the State."

In addition to the statement made above, in a separate document titled *TECHNICAL/AGENCY DRAFT RECOVERY PLAN FOR LAHONTAN CUTTHROAT TROUT*, published by the U.S. Fish and Wildlife Service, it is stated:

> Within the Humboldt River drainage, LCT [LAHONTAN Cutthroat Trout] occur in... about 12 percent of the historic habitat... North Fork Humboldt, Maggie Creek, Rock Creek, and the South Fork Little Humboldt River provide limited metapopulation habitat because of seasonal flow and water quality problems.

Unfortunately, too many people read this kind of reporting and believe it is true only because its put forward by government experts. And with the kind of support that the agencies have been able to gain via their disinformation they usually get what they want - which in the end usually leads to the deterioration of resources rather than their enhancement.

Therefore for the purpose of setting the record straight I submit the following quotes taken from the logs and dairies of those who recorded their observations of the Humboldt River in its historical condition.

In 1828, Peter Skene Ogden, representing the Hudson Bay Company, led a brigade of trappers South from Fort Nez Perce deep into "Snake Country", Ogden is credited with being the first white man to discover the Humboldt River. For some time Ogden called the river, the Unknown River. Later he referred to it as the Marys River. In the book *The Humboldt* author Dale L. Morgan related what Ogden saw as he approached the river in the vicinity of today's Winnemucca, Nevada.

> *From clumps of sage on the hillsides, scrawny, brown-bodied men peered out upon their passage. Down in the Valley, now and again, the Indians scurried into the brush ahead of them. They were clothed, if at all, in twisted rabbit skins; They had no horses. They lived on seeds, and what wild fowl they could bring down. Ogden had never encountered a race of animals less entitled to the name of man.*

That winter, 1828 & 29, Ogden was forced to lead his men North to today's Eastern Idaho, in order to survive the winter. There was no game on the Unknown River. The following Spring he returned to again trap the Marys River. Of that expedition he wrote:

> *The water in this river is very muddy, warm and in my opinion very unwholesome, for in all my travels in the Snake Country the camp have never been so sickly as in this stream. ...As regards animals although the hunters have for the last three days hunting on the mountains, only two antelope have they killed and report having seen eight - as this is the season that animals resort to the rivers and as we have not seen one on its banks I may consequently conclude they are very scarce, and woe to them who depend to them for support - in wild fowl, although the country is well adapted for them, not over numerous.*

On June 3, Ogden Wrote:

> *In fur animals our traps have given a convincing proof that there are beaver, having including fall hunt, given us fourteen hundred. Otter scarcely any. Muskrats although the country favorable for them are not numerous. Mink scarcely any. The country on both sides of the river generally level; soil, sand and white earth, wood, the banks of the river willows of a small size, and in many parts scarcely any and worm wood not so abundant as in many parts of the Snake country.*

Milton Sublette was the next white man to lead a party of trappers to the Mary's, or Humboldt River. He left Pierre's Hole in the Rocky Mountains on July 23, 1832 with 45 men. After traveling down the Owyhee and reaching the Mary's River the party split, with Nathan Wyeth leading 15 of the trappers Northwest into Oregon:

Sublette continued his way, trapping down Marys River, until his hunters finding no wild game, the party were forced to eat the flesh of the beavers they caught, the season was one of famine for these animals, which were forced in their hunger to subsist upon wild parsnips, which poisoned their flesh and made them unwholesome food for the trappers, many of whom were made ill from eating them. Because of this it became necessary to at once abandon the river, and strike across the country towards the North, where after being four days with almost no food, and several weeks in the state of famine they reached the Snake River above the fishing Falls, they were forced, as they passed through the country, to subsist upon ants, crickets, parched moccasins, and the pudding made from the blood, taking a pint at a time from their almost famished animals.

Joe Meek long remembered the expedition. He later recalled:

Holding his hands in an ant hill until they were covered with ants, then licking them greedily; he remembered crisping in the fire, and eating, the soles of his moccasins. Even the large black crickets infesting this country were welcome game.

Joe Walker, under the direction of Capt. Bonneville was the next man to take a party of men across today's Nevada into California. Walker traveled from the Salt Lake down the Marys River and over the Sierras somewhere near the Truckee River. Zenos Leonard served as clerk for the expedition. As they passed down the Marys River, Zenos wrote:

At this place, all the branches of this stream is collected from the mountains into the main channel, which forms quite a large stream; and to which we gave the name Barren River - a name which were thought would be quite appropriate, as the country, Natives, and everything belonging to it justly deserves the name. - You may travel for many days on the banks of this river without finding a stick large enough to make a walking cane.

Later as the party was descending the West side of the Sierra's, Zenos Leonard wrote:

One man killed a deer, which he carried to camp on his back. The animal was dressed, cooked and eaten, ... in less time than a hungry wolf would devour a lamb. This was the first game larger than a rabbit that they had killed since leaving the Salt Lake two months ago. For fourteen days they had lived on nothing but horseflesh ... twenty four horses had died in crossing the mountain, and seventeen of these had been eaten.

Testimony of those who traversed the Humboldt on their way to the newly found gold fields of California 10 years later found conditions no better.

In 1849, Elisha D. Perkins wrote:

> *The stream itself does not deserve the name of river being only a good sized creek... For the first days travel in its valley the grass is splendid, then the valley begins to narrow and feed to get poorer & less of it all the rest of its course, till for the last 80 miles, except in special spots we could hardly get enough for our mules to eat & water barely drinkable from saline & sulphurous impregnation & having a milky color.*

Bennett C. Clark (1849)

> *July 20, 1849 came to the river and nooned - grass only tolerable. We began to be greatly disappointed in our calculations of finding good grass on this measly Humboldt as Mr. Ware had prepared us to expect. Let no traveler hereafter be governed by Ware's Guide as it is perfectly worthless.*

Lerenzo Sawyer (1850)

> *We came to Mary's River, or Humboldt, as some call it, today. All the emigrants dread this river, but we found some grass, Which is more than we expected, as Mr. Sawyer says there was very little here when he came up in '49.*

For those who argue for instream flows and minimum pools, consider the following testimony.

Most historians credit the Bartleson-Bidwell party as being the first emigrants to pass through today's Nevada to successfully reach California. Leaving their wagons on the east slope of the Pequoap range, they traveled south into Ruby Valley, over Harrison Pass, and then down the South Fork of the Humboldt. At their last camp before reaching the main branch of the Humboldt, they wrote in 1841:

> *The creek became perfectly dry and its banks rose to high perpendicular precipices, so that there was no other road than the dry bed of the stream... we encamped in a place, affording a little grass and water - where we could see nothing but the sky.*

In 1846, Necholas Carringer wrote:

> *We crossed Mary's River which at this season was entirely dry, and water was to be had only in deep pools.*

In 1846, Virgil Pringle:

Rolled down stream today 13 miles, the river generally dry.

William H. Kilgore (1850)

On the whole length of this River, we have not seen a tree or stick of wood.

John Wood (1850)

I have not seen a tree or shrub, except bunch willows, for almost 300 miles, and they tell me we will find none until we reach the Carson river, 100 miles ahead.

In 1849, David Jackson Staples wrote:

Today our road lay along the river most of the time, occasionally leaving it for a few miles. Dust! Dust! Dust!

Leander Vaness Loomis (1850)

The road along this river, is so dusty, that it makes travelling very disagreeable. As a general thing the dust along the river is from 6 to 8 inches deep, being of the very lightest kind, so that the least wind will stir it up, and almost blind a person. I have seen it so thick that we could not see wagons that were not more than 4 or 5 rods ahead.

Dr. J. S. Shepherd (1850)

The dust! no person can have the least idea, by a written description - we eat it, drink it, breath it, night and day...

R. H. P. Snodgrass (1852)

And now we begin to suffer in earnest. Our lips bleed almost everytime we speak, and our mouths and throats are sore from the effects of the dust, heat and bad water... The water in the valley is growing worse.

Gilbert L. Cole wrote in 1852:

For about ten days the only water we had was obtained from the pools by which we would camp. These pools were stagnant and their edges invariably lined with dead cattle that had died while trying to get a drink. Selecting a carcass that was solid enough to hold us up we would walk into the pool on it, taking a blanket with us, which we would swash around and get as full of water as it would hold, then carry it ashore, two

men, one holding each end, would twist the filthy water out into a pan, which in turn would be emptied into our canteens, to last until the next camping place. As the stomach would not retain this water for even a moment, it was only used to moisten the tongue and throat.

John Hawkins Clark (1852)

We have a river to draw from but such water - warm as fresh milk and impregnated with alkali and a taste of salt to such a degree that we cannot use it until after the poison is killed by heating.

In 1850 Henry Sterling Bloom wrote:

The river water which we have to use is detestable; it is fairly black and thick with mud and filth; but there is one advantage one has in using it - it helps to thicken the soup which would be rather thin without it.

The Humboldt was not the only stream that was described as being laden with sediments and impurities in the 1800s. "Too thick to drink, too thin to plow", was a popular way most pioneers described the Plat River. With few other sources of water, pioneers were forced to drink the "nasty, filthy stuff," - "warm and muddy, causing diarrhoea."

Members of the Lewis and Clark expedition also recorded heavily laden and breckish waters. While traveling up the Missouri River, in 1904, George Shannon, the youngest of the party, wrote in his journal on July 12th 1904:

Hard rain last night. We was able to proceed under our Sail most of the day, the wind blowing strong from the South relieves the heat som what, which afflicts all the men severly. Many have boils and tumors, which Capt. Lewis attributes to the water. Capt. Clark took a Measure below the Kansas R. he declared that for each pint of water he took from the Missouri R. he found half a wine glass of mud.

Nine days later, on July 21, 1904, Captain Clark wrote:

...arived at the Great River Platt...The current of this river comes with great velosity, roleing its sands into the Missouri, filling up its bed & compelling it to incroach on the S shore. Capt. Lewis and myself with 5 men in a perogue went up this great river Platt about 2 miles, found the current very rapid roleing over sands, passing through different channels none of them more than five or six feet deep, about 900 yards wide at the mouth, I am told by one of our party who wintered two winters on this river, that "it is much wider above, and does not rise more than five or six

feet", "the water so brackish that it can't be drank at some seasons".

Historian, Mabel Johnson, after reading repeatedly of the historic muddy Missouri, wrote in her book *The work-a-day detail of the Lewis and Clark Expedition*:

> *With all the negative history of the river, especially its silty water, this person was looking forward to some day seeing the infamous muddy Missouri. In August 1988 that opportunity came. The annual convention of the Lewis and Clark Trail Heritage Foundation was held at Bismarck, North Dakota. The wonderful opportunity of seeing that silt-laden river was now possible. The temperature was 104 degrees and we were stern-wheeling down the Missouri at the rate of 6 miles per hour. This person was stationed over those faithful paddles to catch her first proof of that historic muddiness. All she could see was beautiful, clear-green water being churned by the paddles. Maybe she had misread the itinerary. Maybe this was a different river. On inquiry of our knowledgeable tour guide, this person heard with sadness that there was no silty Missouri water similar to the Lewis and Clark Expedition.*

This change in sediment loads is not unique to the Missouri, the Platte, or the Humboldt. Hundreds of thousands of acres of meadows have been created on virtually every stream in the West. These meadows act as giant filters gathering the sediments from the waters before they flow back into the creeks and rivers.

Judicious livestock grazing on uplands has also improved the health and vigor of grasslands, in turn reducing the movement of soils to tributaries. Hundreds of reservoirs have been constructed throughout the Western United States which allow for waters to be released over a longer period of time, thus reducing the destructive historical spring runoff.

When John Fremont was passing through the Southern tip of today's Nevada in Spring of 1846, he described very well the adverse effects of unchecked spring flooding under the pristine condition. Upon observing the forces of peak runoff upon encountering the Virgin River near today's Mesquite Nevada, Fremont wrote:

> *The most dreary river I have ever seen - a deep rapid stream almost a torrent, passing swiftly by, and roaring against obstructions. The rampant river was roily with spring flood.*

When the settlers began taking up land along the Humboldt in the 1860's they created one of the greatest wildlife habitats in

the West. By damming the river repeatedly they forced spring waters to flow out over the greater portion of the valley floors, filling every slew and depression with water. Aquatic vegetation began growing in every low place where the water spread. Willows and Wild Rose Bush increased dramatically, and wildlife became more and more abundant.

During this same period ranches were being created on every tributary that afforded irrigation water. In Ruby Valley, Clover Valley, Star Valley, Jiggs, Lee, Lamoille, North Fork, Charleston, Tuscarora, and a hundred other valleys across Nevada, thousands and thousands of wet meadows were developed, creating latterly thousands upon thousands of acres of near perfect wildlife habitat.

In addition to creating vast new wetlands, upper tributary irrigation recharges aquifers, stores flood waters, stabilizes stream banks, reduces erosion, helps regulate ground water discharge, improves water quality, and provides sub-irrigation of meadowlands throughout summer and fall.

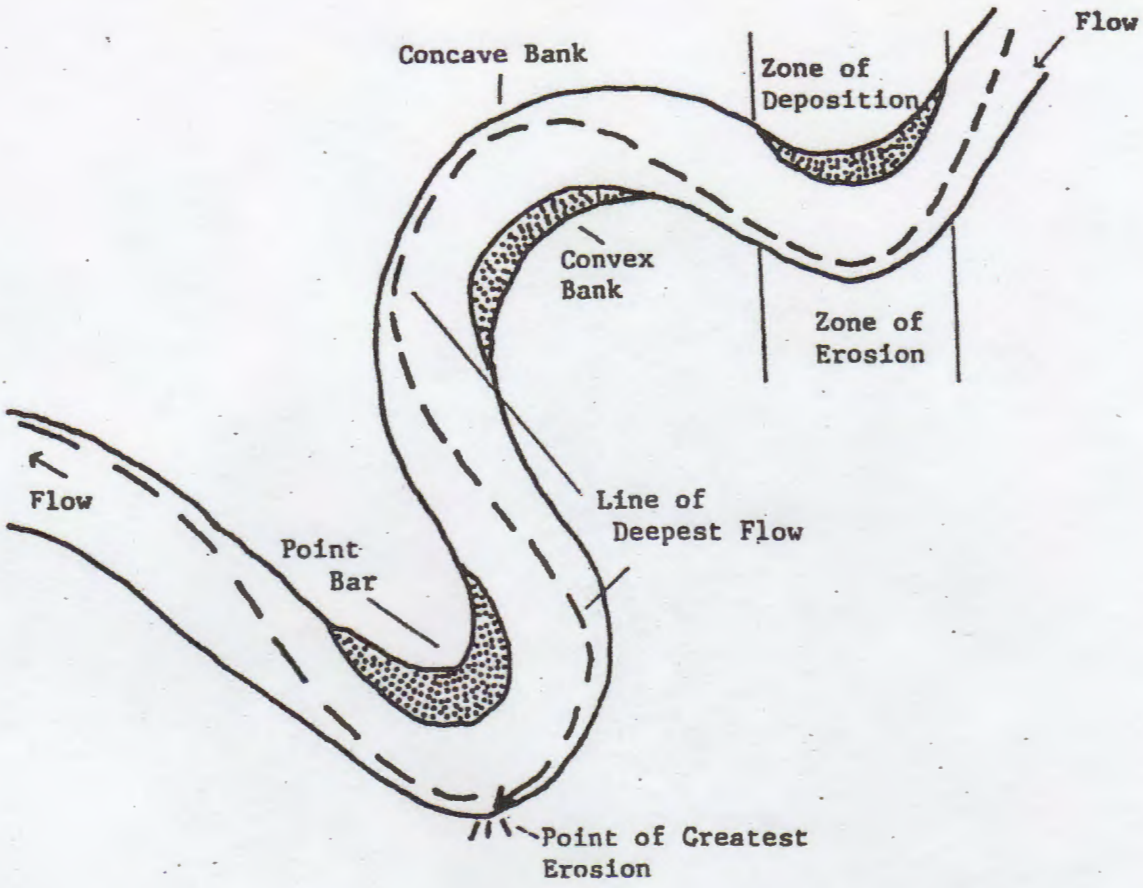
Advocates of state mandates, requiring that instream flows be maintained throughout the year should consider the consequences of such a policy. Ask yourself, what would be lost to wildlife if ranchers were forced to abandon late spring, summer, or fall irrigation in favor of allowing waters to flow down a drying stream bed?

The greatest problem we face today is not wetland degradation, but rather ever increasing regulation. So caught up are we in environmental idealogy that we seem to ignore the truth. From the time this county was settled, up until the early 1960s, wildlife numbers exploded across the western United States - and for good reason, stewardship and productiveness of lands always increase when tenure, (property rights), is recognized. Our system of government when pursued as originally intended, is the greatest system ever devised for the benefit of wildlife.

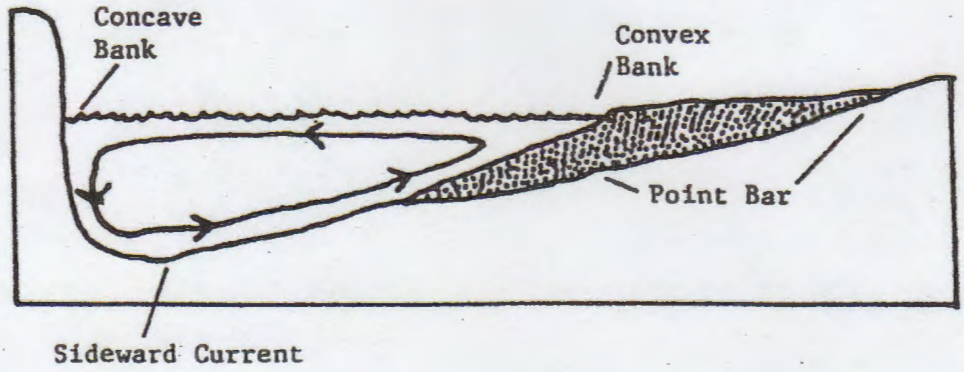
The absolute worst thing that can happen is for government to get involved in land and resource management. Government intervention makes things worse, not better. Our National Parks and Wildlife Refuges are a prime example. Since the early 1930s, there have been over 480 wildlife refuges created on the North American Continent. These refuges encompass the most important wetlands on the North American Continent, yet by the National Fish and Wildlife Service's own figures, less then 2 percent of all waterfowl raised in North America are raised on wildlife refuges.

Without a doubt, one of the greatest problem we face today is governmental disinformation. Bureaucracy by nature, works unceasingly to justify its existence, its power, and its budgets.

Erosion is one of earth's most natural processes, changing courses decade by decade. Rivers and streams have been meandering forever, long before white man ever was to enter the West. Below, the Escalante River carves its way through sandstone as it makes its way to Lake Powell. As is illustrated to the right, stream movement over time does not necessarily mean that waterway condition is worsening.



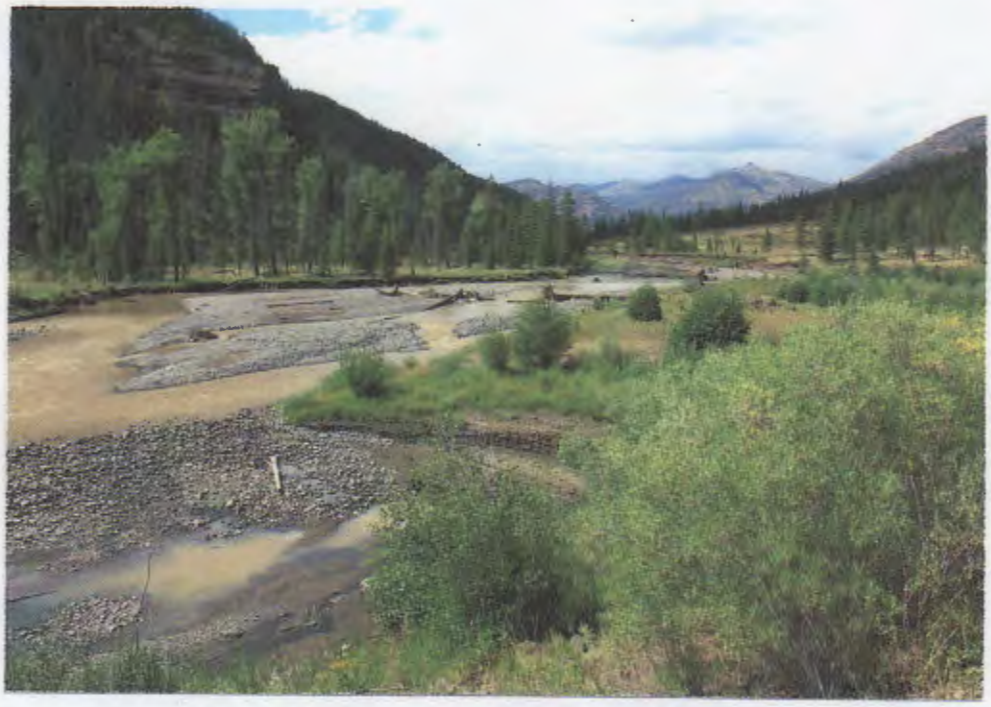
Anatomy of a river channel.



Mechanics of point bar formation in river channels. Sideward currents carry sediments eroded from the concave bank and deposits sediment along the convex bank forming a point bar.

My wife Bertha and I visited old fort Laramie during the summer of 2010, What interested me most was the bridge that was first put in by the military in 1875. Note how the river has narrowed over the years. Two out of the three of the original spans of the bridge are no longer needed. Note also, the condition of the banks of the river. Privately held land on either side of the river attest to the stewardship that accompanies private land ownership. Note in contrast the photo below taken in 1887.

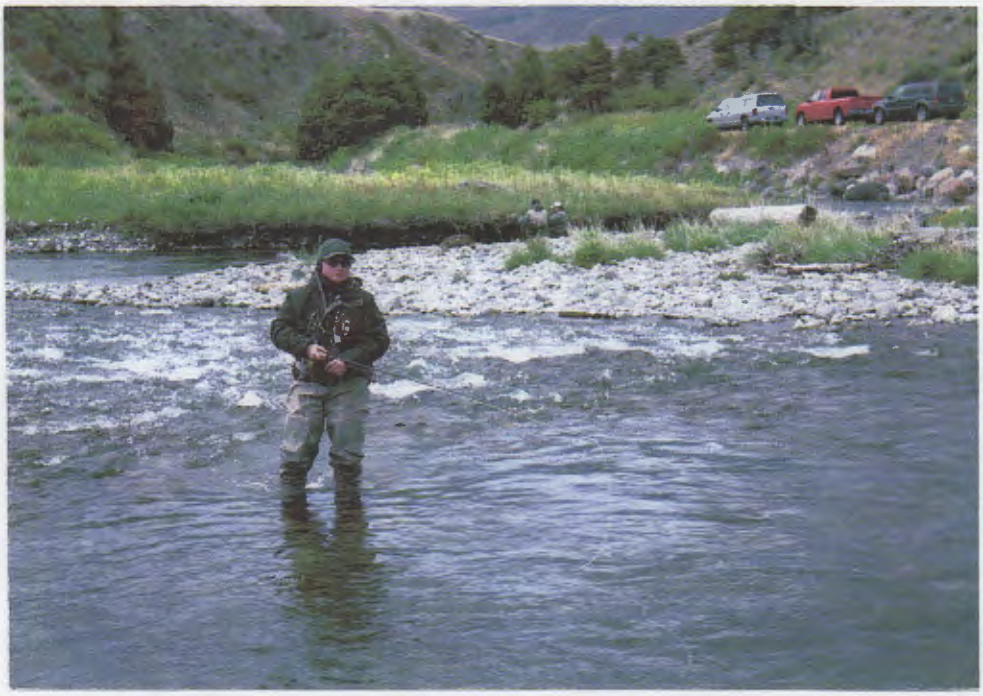
Above is a photo of the North Platt River looking east from the old Fort Laramie Bridge. Below is a photo of the North Platt River looking west from the old Fort Laramie Bridge.



After visiting Fort Laramie, my wife and I traveled east across Wyoming. I wanted to assess, riparian conditions within Yellowstone National Park, the most famed of all federal sanctuaries. Not surprisingly, riparian conditions there were among the worst I had ever seen.

The four photos featured here were taken of the Shoshone River, near the eastern boundary of Yellowstone Park. As can be seen, the Shoshone River at this point bears all the characteristics of a degraded waterway as described by modern day resource managers. Perhaps riparian restoration should began within the boundaries of Yellowstone National Park.

These three photos were taken of the Gardiner River, three miles south of the northern border of Yellowstone National Park. If a stream or river in Nevada looked like this a call for restoration would be heard from all quarters. Apparently fish like these types of areas even though agency folks say they do not, for we saw more fisherman here than at any other place we visited. It makes me wonder how much truth there is in anything the government folks tell us.



Without exception, riparian condition found on private lands was far superior to that found on public lands. This was true wherever we went, whether in Colorado, in Wyoming, in Utah, or Montana.

A Case of Scientific Fraud

The foxes are loose in the henhouse.
By Alston Chase

One of the great mysteries these days is why Bill Clinton allows preservationist zealots in his administration to anger the very states he must carry to win re-election. Thanks to his old-growth forest plan, he can kiss the Pacific Northwest goodbye. Likewise, California may be lost, since the fairy shrimp—species that are even less popular in the Golden State than illegal aliens—have been listed as endangered or threatened.

But more is at stake than the Arkansan's future. By promoting policies based on quack science, the White House invites ecological disaster.

The depths of this misguided fanaticism surfaced recently in a study released by the Interior Department's National Biological Survey, which, as reported by *The New York Times*, claims that more than half of America has "declined to the point of endangerment." Altogether, the report says, 30 ecosystems have declined more than 98 percent and are considered "critically endangered."

With this study, the administration reveals it has turned the foxes loose in the henhouse. One of its authors, Reed F. Noss, occasional contributor to the radical *Earth First Journal*, is an architect of the Wildlands Project. This plan, according to *Science* magazine, seeks to turn nearly half the country into wilderness or protected zones, but does not say what will happen to those who are displaced.

Indeed, the Survey's real intent seems to be scaring people into parting with their liberties. Its true-believers are so obsessed with deconstructing society they ignore both the political and ecological consequences. For the real truth about preservation lies on the ground, far from Washington, and tells a very different story.

The Survey's real intent seems to be scaring people into parting with their liberties. Its true-believers are so obsessed with deconstructing society they ignore both the political and ecological consequences. For the real truth about preservation lies on the ground, far from Washington, and tells a very different story.

Consider recent research by independent scholar Charles Kay at a sheep experiment station in Montana's Centennial Mountains. Comprising 16,646 acres, the station was graded every year since its establishment in 1922. But recently, a mounting chorus of critics have insisted the area is overgrazed. Apparently believing that only its control can "save" the area, the Bureau of Land Management—which would like to own this land but doesn't—insisted, without a shred of evidence, that overgrazing was causing sediments to fill in Red Rock Lakes, a national wildlife refuge. And an environmental group, the Greater Yellowstone Coalition which advocates turning the region into wilderness, has called for closing the station.

To help settle the issue, in 1993, Mr. Kay was asked to examine the grazing impact. And what he found after two years of study was not comforting to critics.

Surveying willow communities along riparian (streamside) areas, where overuse would be most visible and most likely to cause soil erosion, Mr. Kay found few signs of distress. And what he did discover was caused by wildlife, not sheep. Many willows, aspen and subalpine fir "showed extensive signs of repeated browsing by wild ungulates, not domestic sheep.... Moose browsing also appears to be limiting willow catkin and seed production."

Nevertheless, the station's willow communities, he discovered, are in far better condition than those in nearby Yellowstone National Park, thereby confirming a 1993 paper by another researcher, which found that large numbers of elk had caused 100 times more erosion inside the park than out. Along streams at the sheep station, Mr. Kay found willow cover averaged 93 percent and plant height ranged from 47 inches to 13 feet, while in Yellowstone, the canopy was only 14 percent and the median height of plants was 13 inches!

Additionally, Mr. Kay searched for beaver in both places, recognizing that the presence or absence of this animal, which builds dams that slow runoff, is an important barometer of erosion. Finding no beaver in Yellowstone and "at least 44 active dams and seven active colonies" on the station's Odell Creek, he concluded there is "more beaver activity in the 12,885 acres of Odell drainage than there is on Yellowstone National Park's entire northern range (approximately 200,000 acres)."

Thus, Mr. Kay concluded, blaming sheep for erosion was misguided. Surprised, he looked everywhere for data that might establish this mythical connection, but was unable to find any.

Later, he learned a reason why; Cathy Whitlock, a University of Oregon geographer who studied the erosion prehistory of the refuge, had found that the highest rates of sedimentation at upper Red Rock Lake occurred during the later 1700s! After 1906, Miss Whitlock wrote, there was "a dramatic decrease... From 1914 to the present day, the accumulation rate has remained lower than the pre-1906 level."

Thus did Mr. Kay's experience reveal the growing disparity between political claims and scholarly evidence. Preservation policy is a product of scientific fraud, pure and simple. In the short run, Mr. Clinton will pay for this mistake at the polling booth. In the long run, both people and nature will suffer. ■

Scholar/journalist Alston Chase writes a nationally syndicated newspaper column on the environment, distributed by Creators Syndicate. Story reprinted by permission of the author.

A Journalist's Guide To Scientific Correctness

Fashion is in the jeans. Like owning Calvin Kleins, you either have it or not, and I don't. That's why I can't keep up with the changing whims of environmental science. By Alston Chase

When it comes to keeping up with styles, I'm hopelessly out of it. I still sport the same chino slacks, button-downed shirts, tweed jackets and narrow ties I wore in college nearly 40 years ago, and somehow over the years managed to avoid double knits, Nehru jackets and those funny-looking baggy bombachas that my rich San Francisco friends were wearing last year.

Likewise, my political ideas haven't kept pace with the times. In the 1950s I was a card-carrying liberal; and while my views haven't changed, everyone else's have. The same opinions which prompted the U.S. Army to declare me a security risk back then are now cited by some late model liberals as proof positive I work for Attila the Hun. Go figure.

Fashion is in the jeans. Like owning Calvin Kleins, you either have it or not, and I don't. That's why I can't keep up with the changing whims of environmental science.

No field is more faddish. At the turn of the century, saving big game animals was the rage. Officials fed elk, bred bison and bashed wolves. Today they do the opposite—batter bison, breed wolves and encourage hunters to shoot elk. A generation ago old growth forests were called "biological deserts." Now they are revered for "biodiversity." Over the years, the field known as "restoration ecology" went into, then out of, then back into popularity, without once having been tried. Likewise, wildfires were first thought good, then bad, then good, and seem to be on their way out again. Ditto, the mysterious doctrine called "sustainable development."

Clearly, it is easier to trace changes in hemlines than to follow the mercurial vagaries of science. That's why I was so puzzled after reading scholarly articles challenging what I had been taught about forests and rangelands.

For years experts favored trees over grasses. Forests, they insisted, are "sinks" that trap carbon dioxide, which otherwise would remain in the atmosphere, causing runaway global warming. And logging and grazing, they intoned, "destroyed" forests and rangeland.

But the articles I read suggested these claims were wrong. "Temperate grasslands," observed University of Colorado biologist T. R. Seastedt and his University of Kansas associate A.K. Knapp, "are superior soil carbon sinks when compared to forests." Carbon stored by grass stays in the root system, whereas much forest carbon escapes after a wildfire. Meanwhile, increased atmospheric carbon dioxide may stimulate grass growth, thereby accelerating storage of this substance and reducing the risk of global warming.

Similarly, several papers noted the virtues of "disturbances" such as moderate logging and grazing. Seastedt and Knapp reported "grazing opens the canopy, maintains the foliage in a young physiological state, improves water relations for photosynthesis, and increases nitrogen availability to plant roots." It also discourages forests from encroaching on grasslands. Augustana College professor Larry L. Tieszen, along with colleagues from his biology department and The Nature Conservancy, found that along the Niobrara River in Nebraska, "Woodland expansion...has occurred since European settlement" due in part to fences, which limit grazing.

These articles confused me more than ever. Grazing can be good, they suggested; rangeland is a deterrent to global warming, yet preservation efforts are causing it to shrink. This means the Clinton administration's "War on the West"—that includes a clampdown on timber harvests and rangeland grazing—might be based on a mistake.

"Wow," I marveled, "these papers could revolutionize the grazing debate." But then I realized some were published more than four years ago. Why had they not captured headlines in the *Washington Post*?

Puzzled, I telephoned Professor Weathervane Grantgrabber, an expert on scientific trends. "What determines political success of a scientific theory?" I asked.

"It must justify federal intervention," he said succinctly. "It should please environmental lobbyists, agency bosses, Washington journalists. And it should offer career opportunitites to scientists. The researcher who says grazing is good might starve to death. But the one who predicts it will cause galactic meltdown gets the fat National Science Foundation stipend."

I hung up the phone, troubled. Grantgrabber's observation, I mused, means the end of science as a liberating force. In the 17th century this inquiry freed society from coercive church orthodoxies. But scientists have been losing their independence. In the 18th century they formed professional societies and became a bit less autonomous. By the 19th, they were salaried employees of universities. And today most earn a living, directly or indirectly, from government. If they feel pressure to justify coercion, then science has returned to where it was on June 22, 1633, when the Catholic Inquisition compelled the great physicist, Galileo, to deny the earth moved.

"What determines political success of a scientific theory?" I asked. "It must justify federal intervention," an expert on scientific trends said succinctly. "It should please environmental lobbyists, agency bosses, Washington journalists. *And* it should offer career opportunitites to scientists. The researcher who says grazing is good might starve to death. But the one who predicts it will cause galactic meltdown gets the fat National Science Foundation stipend."

Thank goodness, I concluded, nonconformists such as Seastedt and Tieszen are still around, freely following intellectual curiosity. And I wondered, do they wear tweeds and chinos too? ■

A corrupt system of preservation science muzzles the government's own honest scholars. By Alston Chase

Is there a Dark Side? You don't have to be Luke Skywalker to know the anser is "yes."

African Americans are often victims of the Dark Side–the stealth racisom that pervades America. Loggers and ranchers encounter the Dark Side when they are driven off the land by the maneuvers of greens and their bureaucratic allies. Corporate and government whistle-blowers meet the Dark Side when they dare to expose their employers' follies.

The Dark Side is silent conspiracy, accomplished with nods, winks and confidential memos, that seeks to harm individuals whose actions are troublesome to the powerful. And it could not exist without the tacit acquiescence of the majority. When it strikes, most folks look the other way.

Many believe in a Dark Side, but selectively. Liberals see it only in big business, conservatives just in government. But some institutions remain above suspicion by nearly everyone. Such is the status of science, which enjoys such a lofty reputation that few challenge its authority.

But science has a Dark Side too, that lurks in the shadowy realm of environmental research. In this fecund habitat it thrives, shielded from exposure to the bright light of truth. But occasionally the covers are pulled back, revealing this netherworld of false scholarship.

Such was the experience of attentive observers at congressional oversight hearings on National Park Service science, held in February. This event revealed that not only is the agency's poor research a national tragedy, but that this failed effort is corrupting the institution of scholarship itself.

The meeting began ordinarily enough. A gentleman from the General Accounting Office testified to what experienced observers already knew: that service science is grossly inadequate. This presentation was followed by the usual self-aggrandizing testimony of the feds' favored scientists who said, in effect, that if Congress would give them more money everything could be fixed. To this they added a now familiar twist: that parks should be maintained as laboratories for themselves, where they can satisfy their curiosity at taxpayers' expense.

Then the deliberations got interesting. Three scholars testified that the service was allowing overly abundant elk and deer to destroy biodiversity throughout the park system. One of these individuals, Richard Keigley of the Biological Resources Division of the U.S. Geological Survey, then added a zinger: His work, he said. Is being suppressed by Interior Department authorities.

Fearing elk are eliminating critical vegetation in Yellowstone National Park, Keigley sought to investigate whether this is so. But officials wouldn't let him. They even tried to prevent his testifying at this hearing.

Another witness, Charles Kay from Utah State University, had analogous experiences. He told the congressmen how influential scholars, co-opted by Park Service monies, regularly suppress articles in supposedly "independent" journals that do not support federal management. This was shocking stuff. Yet many congressmen listening from the dias seemed unmoved. Aside from the few lawmakers hailing from states where the Interior Department is the big bully on the block, few showed curiosity about the plight of Keigley and none of the experiences of Kay. Congressmen from eastern states, in particular,monkeys who wanted to hear no evil, refused to believe that the Dark Side Keigley and Kay experienced, could exist.

But it does exist, within virtually every federal agency conducting conservation science. Keigley and Kay are merely the latest victims of the corrupt system of official science that muzzles its own honest scholars and even seeks to ruin the careers of independent professors who oppose it. Whistle-blowers are whistled right out of their agencies, and university professors who dare to question policy find their research funding and opportunities dry up and their own articles rejected by academic journals whose editors are on the government payroll.

Coverup has become the name of the game in federal bureaucracies and even in some university departments. And why is this happening? To prevent the public from learning this simple truth: that U.S. preservation policies rest on a fraudulent, pseudo-scientific hypothesis, and as a result, these policies are failing.

This policy is called "natural regulation" or "ecosystems management." It is based on the hypothesis that nature is composed of networks of interconnected parts which interact to keep everything in equilibrium. So long as these systems retain all their members (i.e., sustain their biological diversity), it is supposed, they'll remain healthy. But if they lose enough parts (i.e., species), their capacity for self-regulation fails and they become unstable.

This hypothesis is popular because it seems to explain what has gone wrong with the environment and how to fix it: Environmental health requires ecosystems to remain in balance-or within "the historic range of variability"-which in turn demands that they retain their biodiversity. And the best way to ensure these conditions is to leave ecosystems alone. Achieving preservation, according to the official policy, is to restore its "missing parts" (i.e., "reintroducing" creatures such as wolves) then "let nature take its course."

Hence, the aim of federal preservation is to restore habitats that supposedly existed before "ecosystems" were "damaged" by humans. In the federal lexicon, this is called "recreating pre-settlement conditions"-a notion that is written into every federal law and into the gamut of "ecosystem management" schemes of the U.S. Fish and Wildlife Service, National Park Service, U.S. Forest Service, Bureau of Land Management and other land management agencies.

And while this may look scientific, it's actually based on myth. The concept of a stable, self-regulating ecosystem, scientists concede, is fundamentally flawed. There is no "balance of nature." Original conditions never existed. Rather, landscapes are continually changing, in response to the vagaries of weather, volcanoes, floods, hurricanes and human activities. Random disturbance, not permanence or order, governs nature. Left alone, biological communities do not tend toward equilibrium, but fluctuate dramatically.

As the prominent ecological historian, Donald Worster explained, "the ecosystem has receded in usefulness, and in their place we have the idea of the lowly 'patch.' Nature should be regarded as a landscape of patches, big and little ... changing continually through time and space, responding to an unceasing barrage of perturbations."